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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RONESI, VICKEY M

ART UNIT PAPER NUMBER

1714

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,485

Applicant(s)

SUZUKI ET AL.

Examiner

Vickey Ronesi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/26/2005 has been entered.
2. All outstanding rejections have been withdrawn. New grounds of rejection are set forth below.

Claim Objections

3. Claims 2-9, 11, and 12 are objected to because of the following reasons:

With respect to claims 2-8, 11, and 12, the term "A resin composition" at the start of each claim has antecedent basis in line 1 of claim 1 and should therefore read as "The resin composition".

With respect to claim 9, the term "a resin composition" in line 1 of the claim has antecedent basis in line 1 of claim 1 and should therefore read as "the resin composition".

With respect to claim 10, the term "A producing method" has antecedent basis in claim 9 as "The method" and should read as such.

With respect to claims 2-4 and 12, they are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claims, or amend the claims to place the claims in proper

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dependent form, or rewrite the claims in independent form. In particular, claim 1 defines the resin to be a thermoplastic polyester and therefore cannot be redefined again as a thermoplastic ester in claims 4 or 12 or defined as another resin (e.g., polycarbonate or polyacrylate) in claims 2 and 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki et al (WO 97/43343).

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since WO 97/43343 is in Japanese, in the discussion below, the US equivalent for WO 97/43343, namely US 6,239,195, is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

Suzuki et al discloses a thermoplastic resin composition for injection molding (col. 20, line 49) comprising a thermoplastic resin such as polyester resins, polycarbonate resins, and polyarylate resins (col. 4, lines 40-41) and a silane-treated foliated phyllosilicate that is prepared by introducing an organosilane compound identical in chemical structure to that presently claimed with a range of layer thickness values that substantially overlaps the presently claimed values (claims 1, 8, and 9 of Suzuki et al). A method of making said composition is also disclosed which includes expanding the basal spacing of a swellable layered silicate to three times or more large than the initial basal spacing of the swellable silicate (col. 10, lines 23-25) in a dispersion medium (col. 9, lines 49-50) by introducing the organosilane compound and mixing the dispersion with monomer of the thermoplastic resin (i.e., polymerizable prepolymer) and then polymerizing the polymer (col. 34, lines 11-64).

With respect to claim 9, the addition of the clay dispersion continuously or sequentially over time at the rate of 0.01-10.0 parts by weight (pbw) per minute for 100 parts by weight is also met by Suzuki et al which teaches sequential mixing (i.e., adding the clay dispersion to monomer in col. 14, lines 42-49) and exemplifies compositions in Table 2 bridging cols. 29 and 30 where the clay dispersion is present in an amount of 3.6-6.2 parts by weight. When given sequential addition and the entire amount of clay dispersion is added to monomer, the rate is inherently met because, e.g., when 6.2 pbw are added directly to 100 pbw monomer, the rate of 6.2 pbw per minute for 100 parts by weight is observed where there is no minute after the first minute. Moreover, the continuous addition is also met since the presently claimed step (B) includes addition and then mixing, with no limitation that the adding and mixing occur simultaneously. As claimed, there is no recitation of a constant rate or a minimum time

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requirement and therefore adding all of the clay dispersion at the beginning when the amount of clay dispersion falls within the amount in the presently claimed rate is encompassed by scope of the present claims.

While Suzuki et al is silent with respect to [N] values, aspect ratio, and rheological properties (i), (ii), and (iii) of a composition comprising thermoplastic ester, it is the examiner's position that these properties are inherent since the clay dispersion is prepared in the same manner as presently claimed and such properties are evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Suzuki et al anticipates the presently cited claims.

To the extent that Suzuki et al does not explicitly disclose these properties, it is considered that it would have been obvious to one of ordinary skill in the art to obtain a composition comprising these properties considering that these properties are intrinsic.

Claim Rejections - 35 USC § 103

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (WO 97/43343) in view of either one of Sinka et al (US 4,417,023) Gleave (US 4,105,715).

The discussion with respect to Suzuki et al in paragraph 4 above is incorporated here by reference.

Suzuki et al does not teach gradually adding the clay dispersion to polymerizable monomer, nevertheless, it is the examiner's position that gradually adding one ingredient to another is known in the art to improve dispersion and to prevent sharp increases in viscosity.

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Evidence to support the examiner's position is found in Sinka et al which teaches when adding a filler to monomer, it is advantageous to add the filler (e.g., silica) slowly to make sure that no lumps form (col. 12, line 67 to col. 12, line 26). Further evidence is found in Gleave which teaches that filler is gradually added in order to monomer to form a smooth, homogeneous fluid, i.e., a good dispersion (col. 4, lines 3-5).

Given that it is known to add ingredients slowly to each other in order to avoid disadvantages like forming lumps and obtain improved dispersion, it would have been obvious to one of ordinary skill in the art to slowly add the clay dispersion of Suzuki et al to the polymerizable monomer at any rate, including those within the scope of the present claims, and thereby arrive at the presently cited claims. Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claims 1 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 6,583,208).

It is noted that the terminal disclaimer filed 1/27/2005 overcome an obviousness-type double patenting rejection over Suzuki '208.

Suzuki discloses a resin composition comprising a thermoplastic polyester resin and a silane-treated foliated phyllosilicate that is prepared by introducing an organosilane compound identical in chemical structure to that presently claimed where the average and maximum layer thickness ranges significantly overlap the presently claimed ranges (claims 1-4 of Suzuki).

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Suzuki is silent with respect to the presently claimed properties, nevertheless, it is the examiner's position that the presently claimed properties (i), (ii), and (ii) are intrinsic in Suzuki since its composition meets the presently claimed composition limitations, thereby rendering the presently cited claims obvious over Suzuki.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302).

Commonly assigned Suzuki (US 6,583,208), discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Applicant's arguments that Suzuki is not prior art under 35 USC 102(f) have been considered, however, it is the examiner's position that Suzuki is prior art given that the inventive entity is different. Even though the inventive entities overlap, they are not the same. See MPEP 2137.01(VI)-2137.02. Therefore, Suzuki is prior art under 35 USC 102(f). The point that "it is logically impossible for Suzuki to have filed the application for US '208 before he invented the

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material disclosed in US '208" is noted, but it is not understood how such can prevent a statement of common ownership at the time the invention was made to overcome the 35 USC 103(a) rejection. To establish this, it is suggested that applicant submit a statement such as, "Application X and Patent Y were, at the time the invention of Application X was made, owned by Company Z." See MPEP § 706.02(l)(2), page 700-55 of revised MPEP dated May 2004.

Response to Arguments

7. Applicant's arguments filed 8/26/2005 have been fully considered but they are not persuasive. Specifically, applicant argues that the evidence provided in the declaration filed 8/26/2005 demonstrates that a composition prepared according to the method of Suzuki et al (i.e., mixing the ingredients together all at once) has none of the rheological properties recited as limitations (i)-(iii) in present claim 1.

With respect to applicant's arguments, the examiner agrees that Example 1 of Suzuki et al does not exhibit the presently claimed rheological properties as established by the declaration, however, Example 1 is only one embodiment of Suzuki et al and applicant's data in the declaration is insufficient to overcome the rejections over Suzuki et al. Case law holds that it is perfectly proper for the examiner to look to the whole reference for what it teaches rather than merely rely on preferred embodiments. *In re Courtright* 153 USPQ 735 (CCPA 1967).

In particular, the differences in numerical properties disclosed by applicant's declaration are sufficiently close to the presently claimed values so as to raise questions regarding the criticality of such data for all embodiments of Suzuki et al. Evidence to support this is found in Examples 2-10 of Suzuki et al which all have higher logarithmic viscosities than Example 1.

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Given that the higher logarithmic viscosities would intuitively provide for higher numerical values in the presently claimed rheological claims, it is considered that Suzuki et al still inherently possesses the properties. Applicant has not clearly established that the presently claimed properties are only dependent on the continuous or sequential addition of the clay dispersion to the polymerizable monomer and not on the concentration of clay dispersion or on the logarithmic viscosity.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/23/2005

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